

Battery Specifications

Model: UP-VW1245P1

Customer: PIE

Application: Trickle use

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Please return a copy of these specifications to PSBS {Panasonic Storage Battery (Shenyang) Co., Ltd.} with the customer's signature of approval.

Signature for Approval: _____ : Date _____
: _____ : _____
: _____ : _____
: _____ : _____
: _____ : _____

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Panasonic Storage Battery (Shenyang) Co., Ltd.



SPECIFICATIONS FOR THE RECHARGEABLE VALVE REGULATED LEAD-ACID BATTERY
Model No. UP-VW1245P1

1. Scope

These specifications pertain to Panasonic Storage Battery (Shenyang) Co.,Ltd.'s (PSBS`S) Rechargeable Valve Regulated Lead-Acid Battery, type UP-VW1245P1, hereafter referred to as the "battery" . This document only describes the performance of the battery. The price, delivery date and other matters should be dealt with in other mutual agreements.

2. Requirements

Voltage, capacity, mass and dimensions for this model are shown in Table1.

Table 1 requirements

Model	UP-VW1245P1
Nominal Voltage	12V
Rated Capacity	45W/10 min rate/cell
Mass(approx.)	2.55 Kg
Dimensions	shown in the attached drawing

3. Structure

The battery consists mainly of positive plates, negative plates, separators, electrolyte, valves, a container and a cover. The electrolyte is absorbed in both positive/negative plates and separators. Here a container and a cover meet the requirements of UL1778(UL94V-0).

4. Characteristics

The following characteristics are for the batteries, which are manufactured within 6 months, independently.

4.1 Capacity

If the battery is discharged at 2.25A to the end voltage of 10.5V per battery after a full charge, followed by standing of one hour at an ambient temperature of $25 \pm 2^\circ\text{C}$, the discharge duration time should exceed 170 minutes within the first 3 times of the charge and discharge cycles.

See Table 4 for the characteristic data when the battery is used under the condition of constant wattage load.

Note: Values shown in the table are reference data.

4.2 Shelf life characteristics

The duration time should be more than 80 minutes when the battery, which has been stored at an ambient temperature of $40 \pm 2^\circ\text{C}$ for 4 months, is then stored at an ambient temperature of $25 \pm 2^\circ\text{C}$ for 24 hours and is then discharged at 2.25A to the end voltage of 10.5V per battery.

4.3 Trickle life

If the battery is fully charged with a constant voltage charger with the controlled voltage of $13.7 \pm 0.10\text{V}$ at an ambient temperature of $25 \pm 2^\circ\text{C}$, and every 3 months the battery is discharged at a constant current of 2.25A to 10.5V at an ambient temperature of $25 \pm 2^\circ\text{C}$, the battery shall have a trickle life of over 2 years with a discharge duration of over 1.5 hours.

Note: the expected life of the battery shall decrease by one-half with each rise in temperature of 10°C . In particular, the life of the battery will shorten remarkably at about 40°C . Therefore careful consideration must be taken not to use the battery at high temperature. Also, as mentioned in 4.3 above, the life of battery will vary depending on the charge/discharge